

## BIBLIOGRAPHICAL NOTICES.

*The Fauna of British India, including Ceylon and Burma.* Published under the authority of the Secretary of State for India in Council. Edited by W. T. BLANFORD.—*Butterflies*. Vol. I. By Lieut.-Colonel C. T. BINGHAM. London: Taylor & Francis, 1905. Pp. xxii, 511; pls. 10.

ENTOMOLOGY has been given a considerable share in this valuable series of works, and we are glad to see the first of three volumes on the important and interesting group of Butterflies added. There are some large unfinished works on the subject already; but a compact and complete manual, condensing the vast scattered literature, has long been felt as an ever-increasing want, both by collectors at home and residents in India. There is here every facility given for the determination of specimens, by excellent plain and coloured half-figures, good descriptions, and carefully worked-out keys of families, subfamilies, and genera. Brief descriptions of the earlier stages are also added, when known.

The Indian Fauna is specially interesting in itself: in the south we find occasional affinities with Africa; and along its northern and western frontier it shades gradually into the Western Palearctic Region, the species of Western India having Mediterranean affinities, and those of the high mountains exhibiting Alpine, and occasionally even Subarctic, affinities. On the other hand, there is comparatively little resemblance between Indian and Tropical-American forms.

Col. Bingham has adopted six families of butterflies: Nymphalidæ, Nemeobidæ, Papilionidæ, Pieridæ, Lycenidæ, and Hesperiidæ. The butterflies belonging to the first two families are here described, and the Nymphalidæ are added into six subfamilies, *Danainæ*, *Satyrinæ*, *Acræinæ*, *Libytheinæ*, *Morphinæ*, and *Nymphaliniæ*. Of these, the *Acræinæ* are poorly represented by two species only—one belonging to a genus peculiar to India, and the other representing a very extensive and characteristic group of African species. The *Morphinæ* include a number of magnificent species, rivalling those of Tropical America, the subfamily being elsewhere represented only in that region. The Nemeobidæ also are poorly represented in the Indian Fauna by twenty species belonging to five genera against hundreds in the American Fauna—our only European representative of the family being the well-known *Nemeobius lucina*, the only member of its genus, which is also confined to Europe. The *Danainæ* are a characteristic Indian and African group, poorly represented in America. One species, *Danais chrysippus*, common throughout India and Africa, occurs in Greece. The *Libytheinæ* form a small family, represented in most parts of the world, but generally by only one or two species in each country; five, including the South-European *Libythea celtis*, are included by Col. Bingham in the Indian Fauna. Of the more familiar subfamilies *Satyrinæ* and *Nymphaliniæ*, several characteristic European genera are represented in India, and occasionally we find the same or closely allied species, including, of course, the cosmopolitan *Panassa cardui*.

*Catalogue of the Lepidoptera Phalaenae in the British Museum.*  
 Volume V. *Catalogue of the Noctuidæ in the Collection of the British Museum.* By Sir GEORGE F. HAMPSON, Bart. 8vo.  
 London: Published by Order of the Trustees, 1905. Pp. xvi,  
 634; pls. lxxviii.-xev. (coloured) and text-figures (plain) 172.

THE fifth of Sir George Hampson's biennial volumes contains the classification of the Hadeninæ, the second of the subfamilies into which the author divides the great family Noctuidæ. The Noctuidæ were commenced in vol. iv., which contained about 1200 species of Agrotinæ; the Hadeninæ are somewhat less numerous, 946 species belonging to 78 genera being described in vol. v. The genus *Hadena* itself is restricted to the small group called *Neuria* by Guenée, *Noctua reticulata*, Vill. (= *saponarice*, Esp.), being chosen as the type, because it is the first species included by Schrank under *Hadena*. The classification of the Noctuidæ has altered very much of late years, and Sir George includes many genera formerly placed in separate sections, such as *Leucania*, Ochs., in the Hadeninæ. Several genera, such as *Polia*, Walk., are given a very wide extension, no less than 216 species being described under *Polia*. In such a case it is safe to predict that the genus will probably be subdivided later on. The arrangement of the present volume is similar to those which have preceded it, and Mr. Horace Knight's plates are deserving of high praise.

#### MISCELLANEOUS.

*On a Modification of the Tentacular Apparatus in certain Species of Madrepora.* By ARMAND KREMPF.

A CURIOUS arrangement presented by a species of the genus *Madrepora* (*M. Durvillei*) was noticed by Fowler in 1866. I have found it in three species of the same genus from the Gulf of Tadjoura. Not one of these three forms appears to me to be capable of identification with that which formed the subject of Fowler's investigations.

I note that it is a question of a certain dimorphism affecting a third of the colony examined, and consisting, according to this observer, in a marked hypertrophy of the endodermic epithelium of the upper part of six macenteric mesenteries of the animal. The formation is traversed in its whole length by a sagittal U-shaped canal on the ectodermic walls, terminating in the pharynx in two distinct superposed orifices.

My observations have led me to an altogether different interpretation of the morphological value of these prolongations and of their U-shaped canal. Contrary to all appearance, they do not belong to the mesenteries; they only prolong these superiorly: they are in effect tentacles deformed by important modifications. As for the ectodermic canal which they contain in their median plane, it represents a portion of the buccal disc which a fusion of two tentacles